

United States Patent and Trademark Office



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/545,196	04/07/2000	Junichiro Kizaki	35.C14405	1491
5514	7590 03/29/2004		EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO			CARTER, TIA A	
30 ROCKEFELLER PLAZA NEW YORK, NY 10112		ART UNIT	PAPER NUMBER	
,			2626	1.0
			DATE MAILED: 03/29/2004	· 4

Please find below and/or attached an Office communication concerning this application or proceeding.

		ÁB/
	Application No.	Applicant(s)
	09/545,196	KIZAKI, JUNICHIRO
Office Action Summary	Examiner	Art Unit
	Tia A Carter	2626
The MAILING DATE of this communication Period for Reply	appears on the cover sheet wit	the correspondence address
A SHORTENED STATUTORY PERIOD FOR RE THE MAILING DATE OF THIS COMMUNICATIO - Extensions of time may be available under the provisions of 37 CFF after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a - If NO period for reply is specified above, the maximum statutory per - Failure to reply within the set or extended period for reply will, by sty Any reply received by the Office later than three months after the earned patent term adjustment. See 37 CFR 1.704(b).	N. R 1.136(a). In no event, however, may a rej. reply within the statutory minimum of thirty ripd will apply and will expire SIX (6) MONT atute, £ause the application to become ABA	ly be timely filed (30) days will be considered timely. HS from the mailing date of this communication. NDONED (35 U.S.C. § 133).
Status	\checkmark	
Responsive to communication(s) filed on This action is FINAL. 2b)⊠ ↑ Since this application is in condition for allo closed in accordance with the practice under	This action is non-final. wance except for formal matte	
Disposition of Claims		
4) ☐ Claim(s) is/are pending in the application 4a) Of the above claim(s) is/are without 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and	drawn from consideration.	
Application Papers		
9) The specification is objected to by the Exam 10) The drawing(s) filed on is/are: a) a Applicant may not request that any objection to to Replacement drawing sheet(s) including the con 11) The oath or declaration is objected to by the	accepted or b) objected to b the drawing(s) be held in abeyand rection is required if the drawing(s	e. See 37 CFR 1.85(a).) is objected to. See 37 CFR 1.121(d).
Priority under 35 U.S.C. § 119		
12) Acknowledgment is made of a claim for fore a) All b) Some * c) None of: 1. Certified copies of the priority docume 2. Certified copies of the priority docume 3. Copies of the certified copies of the p application from the International Bur * See the attached detailed Office action for a li	ents have been received. ents have been received in Ap priority documents have been r reau (PCT Rule 17.2(a)).	olication No eceived in this National Stage
Attachment(s)		
 Notice of References Cited (PTO-892) Notice of Draftsperson's Patent Drawing Review (PTO-948) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/Paper No(s)/Mail Date 2. 		Mail Date rmal Patent Application (PTO-152)

Art Unit: 2626

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5, 7-9, 12-17, 19-20, 24-26, 30, 32-37, 39-40, and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Baba et al. (US. 6437881).

Regarding claim 1, Baba et al. discloses a method of processing an image (fig. 1, col. 1, lines57-62) comprising the steps of:

Receiving data which has been transmitted from an apparatus which is connected through a network (fig. 1, col. 3, lines 47-50);

Judging the format of the data which has been received (fig. 1, col. 4, lines 26-32);

Executed the unexecuted processing(s) for data in accordance with the data format thus judged (fig. 1, col. 4, lines 33-37); and

Art Unit: 2626

Outputting the data for which said processing has been executed (fig. 1, col. 4, lines 60-65).

Regarding claim 2, Baba et al. discloses an image processing method according to claim 1, wherein the data format to be judged is the data format which is instructed to said apparatus which is connected through said network (fig. 1, col. 4, lines 26-32).

Regarding claim 3, Baba et al. discloses an image processing method according to claim 1, wherein the data to be received is the data which is produced by analyzing the image (fig. 1, col. 4, lines 5-10).

Regarding claim 4, Baba et al. discloses an image processing method according to claim 1, wherein the received data is the data for which the processing up to a predetermined stage of the processings of a plurality of stages have been executed for the received data in said processing step (fig. 1, col. 4, lines 15-65).

Regarding claim 5, Baba et al. discloses an image processing method according to claim 1, wherein the character recognizing processing is executed for the received data in said processing step (fig. 2, col. 5, lines 7-19).

Regarding claim 7, Baba et al. discloses a method of processing an image (fig. 1, col. 1, lines57-62) comprising the steps of:

Art Unit: 2626

Receiving an instruction having a data format which has been issued from an apparatus which is connected through a network (fig. 1, col. 4, lines 26-32);

Executing, for the image data, the processings up to a predetermined stage of the processings of a plurality of stages in accordance with the data format (fig. 1, col. 4, lines 5-37); and

Transmitting the data which has been processed in said processing step to said apparatus (fig. 1, col. 5, lines 1-6).

Regarding claim 8, Baba et al. disclose an image processing method according to claim 7, wherein an instruction to read out the data is received together with the instruction of the data format in said instruction receiving step (fig. 3, col. 6, lines 1-9); and

Said method further comprises the reading step of starting the processing of reading out the image data in accordance with the instruction to read out the data (fig. 3-4, col. 6, lines 7-14).

Regarding claim 9, Baba et al. discloses an image processing method according to claim 7, wherein the processing of a plurality of stages include the data division of the image data and the character recognition (fig. 2, col. 5, lines 7-37).

Application/Control Number: 09/545,196 Page 5

Art Unit: 2626

Regarding claim 12, Baba et al. discloses an image processing method according to claim 7, wherein the image data is the image data which has been read out through a scanner (fig.1, col. 3, lines 63-67).

Regarding claim 13, Baba et al. discloses an image processing apparatus (fig. 1, col. 3, lines 38-40) comprising the steps of:

Reception means for receiving data which has been transmitted from an apparatus which is connected through a network (fig. 1, col. 3, lines 47-50);

Judgment means for judging the format of the data which has been received (fig. 1, col. 4, lines 26-32);

Processing means for executing the unexecuted processing(s) for data in accordance with the data format thus judged (fig. 1, col. 4, lines 33-37); and

Output means for outputting the data for which said processing has been executed (fig. 1, col. 4, lines 60-65).

Regarding claim 14, Baba et al. discloses an image processing apparatus according to claim 13, wherein the data format to be judged is the data format which is instructed to said apparatus which is connected through said network (fig. 1, col. 4, lines 26-32).

Regarding claim 15, Baba et al. discloses an image processing apparatus according to claim 13, wherein the data to be received is the data which is produced by analyzing the image (fig. 1, col. 4, lines 5-10).

Regarding claim 16, Baba et al. discloses an image processing apparatus according to claim 13, wherein the received data is the data for which the processings up to a predetermined stage of the processings of a plurality of stages have been executed, and said processing means executes the subsequent processings for the received data (fig. 1, col. 4, lines 15-65).

Regarding claim 17, Baba et al. discloses an image processing apparatus according to claim 1, wherein the character recognizing processing is executed for the received data (fig. 2, col. 5, lines 7-19).

Regarding claim 19, Baba et al. discloses an image processing apparatus (fig. 1, col. 1, lines 57-62) comprising the steps of:

Instruction receiving means for receiving an instruction having a data format which has been issued from an apparatus which is connected through a network (fig. 1, col. 4, lines 26-32);

Art Unit: 2626

Processing means for executing, for the image data, the processings up to a predetermined stage of the processings of a plurality of stages in accordance with the data format (fig. 1, col. 4, lines 5-37); and

Transmission means for transmitting the data which has been processed in said processing step to said apparatus (fig. 1, col. 5, lines 1-6).

Regarding claim 20, Baba et al. disclose an image processing apparatus according to claim 19, wherein said instruction receiving means receives, together with the instruction for the data format, an instruction to read out data; and

Said image processing apparatus further comprises reading means for starting to read out the image data in accordance with the instruction to read out the data..

Regarding claim 24, Baba et al. discloses an image processing system according to claim 19, wherein the image data is the image data which has been read out through a scanner (fig.1, col. 3, lines 63-67).

Regarding claim 25, Baba et al. an image processing system to which a first image processing apparatus and a second image processing apparatus are connected through a network (fig. 23, col. 20, lines 15-28),

Wherein said second image processing apparatus executes, for image data, the processings up to a predetermined step of the processings of a plurality of stages in accordance with a predetermined data format to transmit the data for which the

processings up to the predetermined stage have been executed to said first image processing apparatus (fig. 23, col. 20, lines 39-52);

Said first image processing apparatus which ahs received the data for which the processings up to the predetermined step have been executed judges the data format of the received data to execute the unexecuted processing (s) for the received data to output the data for which the unexecuted processing (s) has (have) been executed (fig. 23, col. 20, lines 31-38).

Regarding claim 26, Baba et al. discloses an image processing system according to claim 25, wherein the predetermined data format is the data format which is instructed from said first image processing apparatus to said second image processing apparatus (fig. 23, col. 20, lines 29-38).

Regarding claim 30, Baba et al. discloses an image processing system according to claim 25, wherein said second image processing apparatus starts the processing of reading out the image data in accordance with an instruction to read out the data which has been issued from said first image processing apparatus (fig. 23, col. 20, lines 45-52).

Regarding claim 32, Baba et al. discloses an image processing system according to claim 25, wherein the image data is the image data which has been read out through a scanner (fig.1, col. 3, lines 63-67).

Art Unit: 2626

Regarding claim 33, Baba et al. discloses a storage medium for storing therein an image processing control program which can be read out by a computer (fig. 24, col. 20, lines 56-58), said image processing control program comprising the steps of:

Receiving data which has been transmitted from an apparatus which is connected through a network (fig. 1, col. 3, lines 47-50);

Judging the format of the data which has been received (fig. 1, col. 4, lines 26-32);

Executed the unexecuted processing(s) for data in accordance with the data format thus judged (fig. 1, col. 4, lines 33-37); and

Outputting the data for which said processing has been executed (fig. 1, col. 4, lines 60-65).

Regarding claim 34, Baba et al. discloses a storage medium according to claim 33, wherein the data format to be judged is the data format which is instructed to said apparatus which is connected through said network (fig. 1, col. 4, lines 26-32).

Regarding claim 35, Baba et al. discloses a storage medium according to claim 33, wherein the data to be received is the data which is produced by analyzing the image (fig. 1, col. 4, lines 5-10).

Regarding claim 36, Baba et al. discloses a storage medium according to claim 33, wherein the received data is the data for which the processing up to a predetermined stage of the processings in a plurality of stages have been executed, and also the

subsequent are executed for the received data in said processing step (fig. 1, col. 4, lines 15-65).

Regarding claim 37, Baba et al. discloses an image processing method according to claim 33, wherein the character recognizing processing is executed for the received data in said processing step (fig. 2, col. 5, lines 7-19).

Regarding claim 39, Baba et al. discloses a storage medium for storing therein an image processing control program which can be read out by a computer (fig. 24, col. 20, lines 56-58), said image processing control program comprising the steps of:

Receiving an instruction having a data format which has been issued from an apparatus which is connected through a network (fig. 1, col. 4, lines 26-32);

Executing, for the image data, the processings up to a predetermined stage of the processings of a plurality of stages in accordance with the data format (fig. 1, col. 4, lines 5-37); and

Transmitting the data which has been processed in said processing step to said apparatus (fig. 1, col. 5, lines 1-6).

Regarding claim 40, Baba et al. disclose a storage medium according to claim 39, wherein said instruction receiving step, an instruction to read out data is received together with instruction for data format (fig. 3, col. 6, lines 1-9), and;

Said image processing control program further comprises the step of starting to read out the image data in accordance with the instruction to read out the data (fig. 3-4, col. 6, lines 7-14).

Regarding claim 44, Baba et al. discloses a storage medium according to claim 39, wherein the image data is the image data which has been read out from a scanner (fig.1, col. 3, lines 63-67).

Claim Rejections - 35 USC § 103

- 3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 4. Claims 6, 10-11, 18, 21-23, 27-29, 31, 38, 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baba et al. (US. 6437881) in view of Kaneda et al. (US. 6327382).

Regarding claim 6, Baba discloses an image processing method according to claim 1.

Baba et al. do not disclose comprising the area division correcting step of, for the data for which it is judged in the judgment step that the format of the received data is the data format which has been subjected to the area division processing, when the correction of the area division processing, when the correction of the area division is instructed by a user, carrying out the correction of the area division.

Kaneda et al. discloses comprising the area division correcting step of, for the data for which it is judged in the judgment step that the format of the received data is the data format which has been subjected to the area division processing, when the correction of the area division processing, when the correction of the area division is instructed by a user, carrying out the correction of the area division (figs. 1 & 9, col. 2, lines 40-67 and col. 3, lines 1-15).

It would have been obvious to one skilled in the art at the time of the invention to modify Baba et al. wherein the image separating process included an area division step whereas each image undergoes a plurality of correction and enhancement steps, for example each area is blocked and would undergo resolution conversion and color correction. This implementation corrects/enhance every specific area identified in the judgment step for a quality and accurate output image.

Regarding claim 10, Baba et al. discloses an image processing method according to claim 7.

Baba et al. do not disclose wherein the processing of dividing the area of the image data is executed in said processing step

Kaneda et al. discloses wherein the processing of dividing the area of the image data is executed in said processing step (fig. 1, col. 2, lines 49-63).

It would have been obvious to one skilled in the art at the time of the invention to modify Baba et al. wherein the image separating process included a process of dividing the area whereas each image undergoes a plurality of correction and enhancement steps, for example each area would undergo resolution conversion and color correction. This implementation corrects/enhance every specific area identified in the judgment step for a quality and accurate output image.

Regarding claim 11, Baba et al. discloses an image processing method according to claim 7.

Baba et al. do not disclose wherein the binarization processing is executed for the text area of the image data in said processing step.

Kaneda et al. disclose wherein the binarization processing is executed for the text area of the image data in said processing step (fig. 2, col. 3, lines 11-15).

It would have been obvious to one skilled in the art at the time of the invention to modify Baba et al. wherein an additional process step of binarization is included in the processing of the image data transmitted. This step will permit adjustments to the text whether is declared black/white or color. This feature would assist in producing a quality output image in complicated layouts.

Page 14

Regarding claim 18, Baba discloses an image processing apparatus according to claim 13.

Baba et al. do not disclose comprising the area division correcting step of, for the data for which it is judged in the judgment step that the format of the received data is the data format which has been subjected to the area division processing, when the correction of the area division processing, when the correction of the area division is instructed by a user, carrying out the correction of the area division.

Kaneda et al. discloses comprising the area division correcting step of, for the data for which it is judged in the judgment step that the format of the received data is the data format which has been subjected to the area division processing, when the correction of the area division processing, when the correction of the area division is instructed by a user, carrying out the correction of the area division (figs. 1 & 9, col. 2, lines 40-67 and col. 3,lines 1-15).

It would have been obvious to one skilled in the art at the time of the invention to modify Baba et al. wherein the image separating process included an area division step whereas each image undergoes a plurality of correction and enhancement steps, for example each area is blocked and would undergo resolution conversion and color correction. This implementation corrects/enhance every specific area identified in the judgment step for a quality and accurate output image.

Regarding claim 21, Baba et al. discloses an image processing method according to claim 19.

Baba et al. do not disclose wherein the processings of said plurality of stages include the area division of the image data and the character recognition.

Kaneda et al. disclose wherein the processings of said plurality of stages include the area division of the image data and the character recognition (fig. 1, col. 2, lines 49-57).

It would have been obvious to one skilled in the art at the time of the invention to modify Baba et al. wherein the image separating process included an area division step whereas each image undergoes a plurality of correction and enhancement steps, for example each area is blocked and would undergo resolution conversion and color correction. This implementation corrects/enhance every specific area identified in the judgment step for a quality and accurate output image.

Regarding claim 22, Baba et al. discloses an image processing apparatus according to claim 19.

Baba et al. do not disclose wherein said processing means executes the processing of dividing the area of the image data.

Kaneda et al. disclose wherein said processing means executes the processing of dividing the area of the image data (fig. 1, col. 2, lines 53-67; col. 3, lines 1-15).

It would have been obvious to one skilled in the art at the time of the invention to modify Baba et al. wherein the image separating process included a process of dividing

Art Unit: 2626

the area whereas each image undergoes a plurality of correction and enhancement steps, for example each area would undergo resolution conversion and color correction. This implementation corrects/enhance every specific area identified in the judgment step for a quality and accurate output image.

Page 16

Regarding claim 23, Baba et al. discloses an image processing apparatus according to claim 19.

Baba et al. do not disclose wherein the binarization processing is executed for the text area of the image data in said processing step.

Kaneda et al. disclose wherein the binarization processing is executed for the text area of the image data in said processing step (fig. 2, col. 3, lines 9-15; col. 4, lines 21-28).

It would have been obvious to one skilled in the art at the time of the invention to modify Baba et al. wherein an additional process step of binarization is included in the processing of the image data transmitted. This step will permit adjustments to the text whether is declared black/white or color. This feature would assist in producing a quality output image in complicated layouts.

Regarding claim 27, Baba et al. discloses an image processing method according to claim 25.

Baba et al. do not disclose wherein the processings of said plurality of stages include the area division of the image data and the character recognition.

Kaneda et al. disclose wherein the processings of said plurality of stages include the area division of the image data and the character recognition (fig. 1, col. 2, lines 49-57).

It would have been obvious to one skilled in the art at the time of the invention to modify Baba et al. wherein the image separating process included an area division step whereas each image undergoes a plurality of correction and enhancement steps, for example each area is blocked and would undergo resolution conversion and color correction. This implementation corrects/enhance every specific area identified in the judgment step for a quality and accurate output image.

Regarding claim 28, Baba et al. discloses an image processing system according to claim 25.

Baba et al. do not disclose wherein the processings up to a predetermined stage which are executed in said second image processing apparatus include the area division.

Kaneda et al. disclose wherein the processings up to a predetermined stage which are executed in said second image processing apparatus include the area division (fig. 1, col. 2, lines 50-63)

Baba et al. disclose the unexecuted processing (s) which is (are) executed in said first image processing apparatus include (s) the character recognition (fig. 1, col. 2, lines 45-53).

Art Unit: 2626

It would have obvious to one skilled in the art at the time of the invention to modify Baba et al. wherein Kaneda et al. can be considered as the second image processing apparatus performing area division. This feature takes an original image and divides the image into blocks wherein each blocked area has a plurality of processing steps performed to produce a quality image, specifically for complicated layouts.

Regarding claim 29, Baba discloses an image processing system according to claim 25.

Baba et al. do not disclose comprising the area division correcting step of, for the data for which it is judged in the judgment step that the format of the received data is the data format which has been subjected to the area division processing, when the correction of the area division processing, when the correction of the area division is instructed by a user, carrying out the correction of the area division.

Kaneda et al. discloses comprising the area division correcting step of, for the data for which it is judged in the judgment step that the format of the received data is the data format which has been subjected to the area division processing, when the correction of the area division processing, when the correction of the area division is instructed by a user, carrying out the correction of the area division (figs. 1 & 9, col. 2, lines 40-67 and col. 3, lines 1-15).

It would have been obvious to one skilled in the art at the time of the invention to modify Baba et al. wherein the image separating process included an area division step whereas each image undergoes a plurality of correction and enhancement steps, for

Art Unit: 2626

example each area is blocked and would undergo resolution conversion and color correction. This implementation corrects/enhance every specific area identified in the judgment step for a quality and accurate output image.

Regarding claim 31, Baba et al. discloses an image processing system according to claim 25.

Baba et al. do not disclose wherein said second image processing apparatus executes the binarization processing of the text area of the image data in accordance with the predetermined data format.

Kaneda et al. disclose wherein the binarization processing is executed for the text area of the image data in accordance with the predetermined data format (fig. 2, col. 3, lines 9-15; col. 4, lines 21-28).

It would have been obvious to one skilled in the art at the time of the invention to modify Baba et al. wherein an additional process step of binarization is included in the processing of the image data transmitted. This step will permit adjustments to the text whether is declared black/white or color. This feature would assist in producing a quality output image in complicated layouts.

Regarding claim 38, Baba discloses a storage medium according to claim 33.

Baba et al. do not disclose comprising the area division correcting step of, for the data for which it is judged in the judgment step that the format of the received data is the data format which has been subjected to the area division processing, when the

Art Unit: 2626

correction of the area division processing, when the correction of the area division is instructed by a user, carrying out the correction of the area division.

Kaneda et al. discloses comprising the area division correcting step of, for the data for which it is judged in the judgment step that the format of the received data is the data format which has been subjected to the area division processing, when the correction of the area division processing, when the correction of the area division is instructed by a user, carrying out the correction of the area division (figs. 1 & 9, col. 2, lines 40-67 and col. 3, lines 1-15).

It would have been obvious to one skilled in the art at the time of the invention to modify Baba et al. wherein the image separating process included an area division step whereas each image undergoes a plurality of correction and enhancement steps, for example each area is blocked and would undergo resolution conversion and color correction. This implementation corrects/enhance every specific area identified in the judgment step for a quality and accurate output image.

Regarding claim 41, Baba et al. discloses a storage medium according to claim 39.

Baba et al. do not disclose wherein the processings of said plurality of stages include the area division of the image data and the character recognition.

Kaneda et al. disclose wherein the processings of said plurality of stages include the area division of the image data and the character recognition (fig. 1, col. 2, lines 49-57).

Art Unit: 2626

It would have been obvious to one skilled in the art at the time of the invention to modify Baba et al. wherein the image separating process included an area division step whereas each image undergoes a plurality of correction and enhancement steps, for example each area is blocked and would undergo resolution conversion and color correction. This implementation corrects/enhance every specific area identified in the judgment step for a quality and accurate output image.

Regarding claim 42, Baba et al. discloses a storage medium according to claim 39.

Baba et al. do not disclose wherein the processing of dividing the area of the image data is executed in said processing step.

Kaneda et al. disclose wherein the processing of dividing the area of the image data is executed in said processing step(fig. 1, col. 2, lines 53-67; col. 3, lines 1-15).

It would have been obvious to one skilled in the art at the time of the invention to modify Baba et al. wherein the image separating process included a process of dividing the area whereas each image undergoes a plurality of correction and enhancement steps, for example each area would undergo resolution conversion and color correction. This implementation corrects/enhance every specific area identified in the judgment step for a quality and accurate output image.

Regarding claim 43, Baba et al. discloses a storage medium according to claim 39.

Art Unit: 2626

Baba et al. do not disclose wherein the binarization processing for the text area of the image data is executed in said processing step.

Kaneda et al. disclose wherein the binarization processing for the text area of the image data is executed in said processing step (fig. 2, col. 3, lines 11-15).

It would have been obvious to one skilled in the art at the time of the invention to modify Baba et al. wherein an additional process step of binarization is included in the processing of the image data transmitted. This step will permit adjustments to the text whether is declared black/white or color. This feature would assist in producing a quality output image in complicated layouts.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sakai et al. (US. 5949555), Ueno et al. (US. 6483609), Taguchi (US. 5719969), Koga et al. (Us. 6556711), Ariki et al. (Us. 5113492), Tanioka (US. 6661921), and Honma (US. 6304313) are cited to show related art with respect data processing.

Page 22

Page 23

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tia A Carter whose telephone number is 703 - 306-5433. The examiner can normally be reached on M-F (7:00-3:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A Williams can be reached on 703-305-4863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TAC

March 19, 2004

Tia A Carter Examiner Art Unit 2626

KIMBERLY WILLIAMS
SUPERVISORY PATENT EXAMINER